2;Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

The successful establishment of corn mills in Tepoztlán (Fig. 19) is important as an example of the process by which a modern technological trait becomes incorporated into a "folk culture." The first mill was set up in 1925 by a non-Tepoztecan. The response of the village was so feeble that he left after two years. Redfield lived in the village during this first attempt and explained some of the obstacles.

There are three reasons why the mill has only a limited use: to many the slight cost is prohibitive; husbands assert that the flavor of *tortillas* made of mill-ground *nixtamal* is inferior; and, finally, to bring her maize regularly to the mill to the neglect of her *metate* lowers a woman in her neighbors' eyes.

To these reasons our informants added another: the strongest objections to the mill came not from the women but from the men, who viewed with great distrust the prospects of their wives having some leisure. The men believe firmly that the more occupied a woman is, the less are the possibilities of infidelity.

Shortly after Redfield left the village, a Tepoztecan opened another mill with great success. This success was due to a campaign of a group of women who saw the advantages which the mill would bring. Two years later another mill opened, and by 1942 there were four in the village. Today there is not a woman who does not regularly patronize the mills. A male informant described the success of the mill as "the revolution of the women against the authority of the men."

Having discussed the increase in the old occupations and the addition of new ones, we can now consider the question of specialization. It is here that we find one of the most important developments. Twenty years ago all of the so-called specialists were also farmers who closed their shops and went into the fields during the seasons of planting and harvesting. Today, considering all of the occupations, new and old, we find that of 220 men, 60 no longer work as farmers. The occupations in which we find the largest percentage of full-time specialists are as follows: storekeepers, chauffeurs, and bus line employees, teachers, butchers, shoemakers, millers, plumbers, druggists, barbers, and corn merchants.

It is interesting to note that generally the full-time specialists are in the "new" occupations, while the part-time specialists are in the occupations dating from the colonial and pre-Hispanic periods.

COLLECTIVE LABOR

Collective labor,[10] known as the *cuatequitl*, is in all probability an ancient tradition in Tepoztlán. At present it takes a number of forms, the village *cuatequitl*, the barrio *cuatequitl*, the *cuatequitl* of neighbors, and, on rare occasions, an inter-village *cuatequitl*. The village *cuatequitl* is a compulsory form of collective labor organized by the village authorities for public works such as improving the roads, constructing public buildings, or doing other work which, in theory, will benefit the village as a whole. Each able-bodied man between ages twenty-one and fifty can

[10] Family labor has already been treated in Chapter 3, "Status Distinctions and Family Organization," p. 61.

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

243 weeded field of one hectare. Whenever possible the weeds are plowed under to improve the fertility of the soil. The steel plow is used in the *barbecho*, and the land is plowed in one continuous furrow to make a concentric rectangular form.

If the field is large, it may be divided into two or three parts, each of which is plowed in the same fashion. The land is always plowed at right angles to the direction in which the rows of corn are to be planted, so that the rows can be kept straight. Tepoztecans pride themselves on having straight rows of corn, and farmers [461] will compete with one another to see who can plow the straightest. One man with a single team of oxen can plow on an average of about two *cuartillos* a day. If time permits, two *barbechos* will be given; the second is always done soon after the first rains, toward the end of May or early in June.

In the case of *los tres arados* which is used in preparing a field that has been in cultivation the previous year,[1] the steel plow is also used, and the plowing follows the old corn beds and furrows. The plow is placed just to the right of the old cornstalks, and the earth is turned to the right. This is called the *primer arado* (first plowing). When the oxen reach the end of the furrow they are turned, and the same process is followed on the adjoining corn bed, so that a new mound of earth is formed where the furrow was before. This is called the *segundo arado* (second plowing). In both the first and second plowing a short yoke is used, and [492] the oxen walk in the furrows on either side of the corn bed. The plow driver walks to the left of the bed, holds the plow with his right hand, and directs the oxen with his left. The *tercer arado* (third plowing) goes through the center of the corn bed. The third plowing forms part of the process of planting.

243 *Planting:* This generally begins a few days after the ground has been plowed, 221 preferably when the earth is humid. But it is important to note that in Tepoztlán there is a great deal of leeway in the time of planting. A few days or even a few weeks make very little difference in the net results. Corn can be planted any time between June 1 and July 25 with a fairly good chance of getting a crop. Tepoztecans, [461] therefore, follow no rigid work cycle. Of approximately four hundred farmers who may plant corn with plow and oxen in any one year, no more than a third begin their work immediately after the first rains. The reasons for this are varied. Many own neither land nor oxen and may be delayed in making arrangements for renting, in preparing their tools, plows, and yokes; others may still be busy selling wood and charcoal; still others may be delayed by illness or death in the family. It is a common sight in Tepoztlán to see corn at various stages of growth during the rainy season.

243 The selection of seed for planting is generally done soon after the harvest in January, when the finest ears of corn are set aside to be shelled later in May or 242 June, just before planting. Three types of corn are used in plow culture, *ancho*

[433] [1] Some use the *barbecho* on land that has been cultivated the year before, and then follow with the *tres arados*. This gives a better yield but involves at least three additional days of work for [461] a plot of twenty *cuartillos* or approximately two hectares. Only the best farmers, about ten per cent, do this.

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

Harvest: The harvest generally consists of two stages. The first is stripping the cornstalks of their leaves. This process is known as the *zacatee* and begins in early November. The leaves are bundled and transported to the house, where they are used for fodder. Stripping a cornfield of ten or twelve *cuartillos* takes six days of work. Sometimes men will compete to see who can strip two rows in the shortest time. The *zacate* is tied into bundles or *gavillas*. Twelve *gavillas* make up one *manojo* and twelve *manojos* make up one *carga*. These *cargas* of *zacate* are transported home on horse or mule. The transporting of the *zacate* produced on a field of ten to twelve *cuartillos* takes three days of work, using two mules and making two trips a day.

The harvest of the corn itself begins in early December.[11] It takes about five days of work to pick the corn on a field of one hectare. A good worker can pick approximately two *cargas* of corn a day. The corn, like the *zacate*, is transported by mule and it takes about the same time, that is, three days. It is customary to celebrate the harvest by serving *pozole* to the helpers and to the men who are hired to transport the corn. During the harvest the wives may help in stripping the leaves off the ears of corn. These leaves are known as *totomaxtli* and are used in making tamales. Widows often ask for permission to gather corn leaves to sell.

The *cuatequitl* or unpaid cooperative labor system referred to earlier is reserved exclusively for the planting, cultivation, and harvesting of the land owned by the barrio for the support of its chapel, and working the barrio land is the only occasion for unpaid collective labor in agriculture. There are cases of labor exchange between relatives, but this is viewed as very different from *cuatequitl*. I should like to emphasize this point, for Tepoztecan farming is highly individualistic and in this sense quite similar to our own farming.

There is some time pressure in harvesting, in those cases in which many privately owned plots are encircled by a single fence or stone wall. The farmer who has completed his harvest is entitled to allow his animals to graze, and this endangers the corn on those fields not yet harvested. To avoid this danger and the many quarrels resulting from it, the farmers within a single enclosure generally come to some agreement to have their plots harvested within a specified time, which agreement is registered with the local authorities. Although this situation would seem to call for cooperative harvesting, each family, with the aid of hired labor, harvests its own field.

In the first few days of January most farmers begin to store the corn in the storage bins that are of two types, the *xincolotes* and the *ahuatlapiles*. The corn is generally stored without being shelled so that it will better resist the corn worms which are a great problem to Tepoztecans. Sometimes a considerable portion of the harvest is eaten or spoiled by these worms. It is customary in many families to leave the corn on the cob until April or May; prior to that, they shell only what they need.

[11] Formerly stripping and harvesting were begun after the appearance of the full moon.

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

estimate if we follow Tepoztecan classifications: First-class land will produce on an average of two *cargas* of ears of corn for every *cuartillo* of seed planted; second-class land will produce on an average of one *carga* for each *cuartillo* of seed; and third-class land will produce about one-half a *carga*. Thus productivity of the best land is about four times that of the poorest land.

Most Tepoztecans do not use fertilizer in their fields. They are apparently aware of its benefits but, because of the shortage of manure and the expense of commercial fertilizer, are unable to use it.

A few Tepoztecan farmers have attempted to divert seasonal streams, which come down from the mountain forests to their fields, to capture some of the rich humus of the forest, and the results have been spectacular. Portions of fields which received this humus more than tripled their production. There are unfortunately few such streams, and even if all were diverted in this fashion, they would help only a few farmers.

PRODUCTION TIME AND COST

An analysis of production time in plow culture is extremely difficult, because Tepoztecan peasants keep no records and because of the large number of variables to be considered. The following account, based upon careful observation of a few cases and extended interviews with many farmers, is presented with an awareness of some shortcomings on our part.

There is considerable range in the amount of man-days of work that goes into the clearing, planting, cultivation, and harvest of a cornfield. The most important variables are the nature of the terrain, the quality of the soil, the speed of the oxen and the workers, the type of seed used, etc. Judging from our data, the total number of man-days of work needed for the production of one hectare of corn ranges from about 35 to 65 days, depending upon the variables previously mentioned.

If we were to consider 50 man-days of work as an average we would not be far wrong. Actually, however, there are only about 35 days spent working a field of one hectare by any one man. Most men work as day laborers in the fields of others, so that on the average a man puts in about 50 work days in plow culture from the beginning of June to the end of December. However, this estimate does not include many days spent by the farmer in guarding his field against cattle and trespassers.

In Table 31 we present a study of the time spent in the production of corn in a milpa of ten *cuartillos*. In this case we have participated in and carefully observed each of the operations listed. In addition we have obtained estimates of production time from many informants, and some of these are given in Table 32.

It will be seen from these tables that the greatest amount of time is spent in cultivating and harvesting the corn. The preparation of the fields and the planting take relatively little time. The fact that farmers spend a relatively small part of the year at their major occupation gives them a great deal of time for other economic activities, as well as enforced leisure.

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

TABLE 31. Time Spent in Production of Corn in Plow Culture on Sample Plot, 1944.

Operation	Plot of Ten *Cuerdas*		
	No. of Workers	No. of Days Worked	No. of Man-Days
Clearing of land (*limpia*)	1	3.0	3.0
Plowing (*barbecho*)	1	5.0	5.0
Plowing (*surcado*)	1	1.4	1.4
Seeding (*siembra*)	2	1.4	1.4
First cultivation (*primer mano*)	2	3.0	6.0
Second cultivation (*segundo mano*)	2	2.0	4.0
Third cultivation and hilling (*cuija o desperho*)	2	1.0	2.0
Weeding (*solada*)	1	2.0	2.0
Stripping cornstalks (*zacate*)	1	6.0	6.0
Tying leaves in bundles (*juntado*)	1	1.0	1.0
Transport leaves (*acarreo*)	1	3.0	3.0
Corn picking (*pizca*)	1	5.0	5.0
Corn transport (*acarreo mazorca*)	1	3.0	3.0
Corn shelling (*desgranado*)	1	5.0	5.0
Total			47.8

The question of estimating costs of production is difficult because Tepoztecans, like most Mexican peasants, do not keep accounts of their expenses, and more important, do not estimate their own labor in terms of its monetary value. They are, however, quite familiar with the value of a day's work in money, since they all hire labor at one time or another, or themselves work for a wage. Tepoztecan farmers are also apt to speak of "time lost" when they are called upon to serve on village guard duty, or if they have to go to court over some legal matter.

Despite the fact that labor time is not so evaluated locally, we have assigned money value to the labor of the farmer-operator to arrive at some notion of relative production costs. In estimating total production costs we have considered the prevailing daily wage of hired labor and the cost of hiring oxen as the two most important items of cost. Our estimates, although approximations, illustrate the wide range in production costs for a single hectare of corn, and the relative cost of each operation. Variations in production costs are due to such factors as differences in

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

243
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[p. 146]

TABLE 32. Estimate of T... Spent in Production of Corn in Plow Culture in Four Sample Plots, 1944.

Operation	Plot I (12 *Cuartillos*)		Plot II (10 *Cuarnillos*)		Plot III (10 *Cuartillos*)		Plot IV (10 *Cuartillos*)	
	No. of Workers	No. of Man-Days	No. of Workers	No. of Man-Days	No. of Workers	No. of Man-Days	No. of Workers	No. of Man-Days
Clearing of land	1	4.0	1	6.0	1	3	2	2
Plowing	1	6.0	1	4.0	1	4	2	2
Total		10.0		10.0		7		4
Plowing	1	2.0	1	1.5	1	2	1	1
Seeding	1	2.0	1	1.5	1	2	2	2
Total		4.0		3.0		4		3
First cultivation	2	8.0	2	4.0	2	6	2	2
Second cultivation	1	4.0	2	8.0	1	3	2	2
Third cultivation	1	1.5	1	2.0	1	1	1	1
Weeding	1	3.0	4	4.0	1	1	2	2
Total		16.5		18.0		11		7
Stripping cornstalks	12	12.0	10	10.0	1	5	4	4
Tying leaves in bundles	1	1.0	1	1.0	1	1	1	1
Transport of leaves	1	6.0	1	6.0	1	4	6	6
Corn picking	4	8.0	7	7.0	7	7	4	4
Corn transport	1	3.0	1	6.0	1	3	4	4
Corn shelling	1	6.0	1	7.0	1	3	1	3
Total		36.0		37.0		23		22
Total		66.5		68.0		45		36

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off at intervals all night to frighten away the rodents who have been getting after the corn. It is believed that a good fireworks session will keep them away for as long as two weeks.

Harvest: The harvest procedures are very similar to that of plow culture, except that most *tlacololeros* do not transport the fodder because the distances are too long, and it is considered uneconomical. Also most *tlacololeros* are poor and do not own a horse or burro and must hire them.

YIELD

Corn yields in newly cleared *tlacolol* fields are high, much higher than yields in plow culture. A normal yield on a newly cleared plot of *tlacolol* is about two *cargas* for each *cuartillo* of corn planted, and even three *cargas* are not unusual. But the yields decrease very markedly the second year, and most milpas are then abandoned for a new clearing because of the exhaustion of the slight top humus. The yields in *tlacolol* of *texcal* are somewhat higher than those in the *cerros*.

PRODUCTION TIME AND COST

An estimation of the time required in the production of corn in *tlacolol* must take into consideration both the *texcal* and the *cerro* plantings because of the variations within each. Table 36 compares the approximate number of man-days spent on each operation in both types of *tlacolol*.

TABLE 36. Estimated Time Spent in Production of Corn in *Tlacolol*, 1944.

Operation	Man-Days Spent in *Tlacolol* Clearing	
	Texcal (10 *Cuartillos*)	*Cerro* (7 *Cuartillos*)
Clearing with machete and ax	40	21
Fencing with poles	12	20
Burning	8	1
Seeding with *coas*	12	7
Reseeding	4	2
Weeding by hand	30	40
Repairing fence	—	40
Transporting corn	12	8
	10	15
Shelling corn (15 *cargas*)	15	7
Total	143	161

Despite the fact that our sample from the *cerro tlacolol* is a smaller plot, it took thirty-eight days to work it. Taking into consideration differences in the size of

2;Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

243 133 [46] both plots, the most obvious difference in production time is in clearing and fencing the land. Due to the rougher terrain, clearing and burning in *texcal* are more difficult and time-consuming than in *cerros*. On the other hand, because of the greater threat from grazing cattle, the building and repairing of fences are more time-consuming in the *cerros*.

Estimated costs of production based upon the same two plots clearly demonstrate the wide range in costs which prevails in Tepoztlán. (See Table 37.)

TABLE 37. Estimated Cost of Production of Corn in *Tlacolol*, 1944.

Operation	Pesos Spent in *Tlacolol* Clearing					
	Texcal (10 *Cuartillos*)			*Cerro* (7 *Cuartillos*)		
	Hired Labor	Own Labor	Total	Hired Labor	Own Labor	Total
Clearing with machete and ax		60.00	60.00		31.50	31.50
Fencing with poles		18.00	18.00	17.50	17.50	35.00
Burning		12.00	12.00		1.50	1.50
Seeding with *coxolo*		18.00	18.00		10.50	10.50
Reseeding		3.00	3.00		3.00	3.00
Seed			3.00			2.10
Seed for reseeding			.40			.20
Weeding by hand		54.00	54.00	21.00	60.00	81.00
Repairing fence					39.00	39.00
Harvesting		18.00	18.00		12.00	12.00
Transporting corn	15.00		15.00	22.50		22.50
Shelling corn		22.50	22.50		13.50	13.50
Total	15.00	205.50	223.90	61.00	188.50	251.80
Amount and value of corn produced	15 *cargas* at 30.00 each		450.00	9 *cargas* at 30.00 each		270.00
Total cost and value			223.90			251.80
Net profit			226.10			18.20

The lower yields and higher costs of producing corn in the *cerro tlacolol* as compared with the *texcal tlacolol* make the *cerro* less economical to work, and it is also more time-consuming. But since the families who work *tlacolol* are for the most part subsistence farmers, our comparisons of the relative profits involved in each type are strictly for purposes of analysis.

PLOW AND HOE CULTURE COMPARED

243 [423] Now that we have examined both plow and hoe culture, as they are carried on in Tepoztlán, let us compare the two systems in some of their more important characteristics. We have seen that there are more families engaged in plow culture than in *tlacolol*, and that there is overlapping in that some families participate in both systems. The distribution of the families who work private holdings, *ejido*

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

holdings, and *tlacolol* is approximately as follows: 36 per cent of all families operate private land; 31 per cent operate *ejido* parcels; and 20.9 per cent operate *tlacolol*. Since both *ejido* and private parcels employ plow culture, it is evident that the *tlacololeros* constitute by far the smallest group. Hoe culture is secondary in importance to plow culture from the point of view of the number of families engaged in each. This is seen even more clearly when we recall that all but 96 of the *tlacololero* families had an *ejido* parcel, a private milpa, or both. However, *tlacolol* is still very important in the total economy of the village.

One of the most striking differences between the two systems is the much greater amount of time necessary in hoe culture. It will be seen from Table 38 that it takes approximately two-thirds more man-days to produce one hectare of corn in *tlacolol* than it does in plow culture. As we have seen, the single job of weeding by hand takes more time than all three cultivations with plow. The great difference in the total time spent in preparation of the land is also noteworthy. The somewhat longer time period for harvesting and transport is due to the greater distances of *tlacolol* fields from the village and the larger relative production of the *tlacolol* milpas. It should be noted that fencing the *tlacolol*, which is so time-consuming, has to be repeated each time a new *tlacolol* is opened—in contrast with the permanent stone fences of private milpas and *ejidos*.

TABLE 38. Comparison of Time Spent in Production of Corn in Plow and Hoe Culture.

Operation	Man-Days Spent on Plot of One Hectare	
	Plow Culture	Hoe Culture (*Texcal*)
Preparation of the land	8.0	60
Planting	2.8	16
Cultivation	14.0	30
Harvest	15.0	12
Transporting corn	3.0	10
Shelling Corn	5.0	15
Total	47.8	143

In addition to the differences in the actual time spent there is a corresponding difference in the nature of the work. Tepoztecans who have worked in both types consider work in *tlacolol* infinitely more exhausting than work in plow culture. The *tlacololeros* are in a sense perpetual pioneers who are always making new clearings in the forest. Also, weeding by hand is very difficult and leaves welts for days on the hands of the toughest *tlacololero*. It is said in the village that a *tlacololero* is known by his hands.

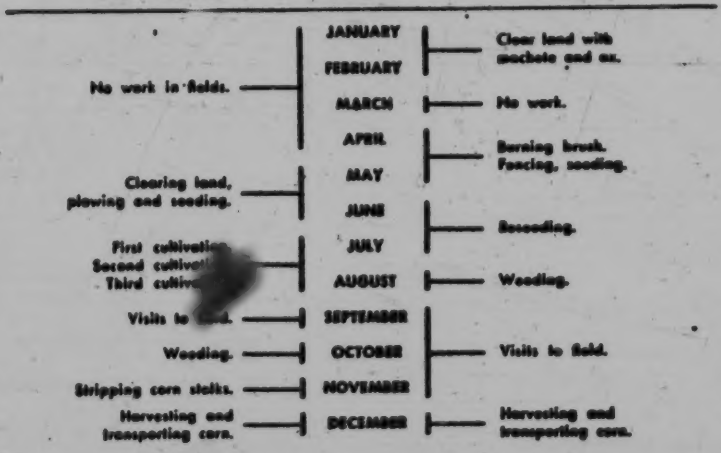
Another very important point is the difference in time pressure demanded by each system of agriculture. On the whole there is much less time pressure in *tlacolol*. A man can clear his land anytime between January and April. He can work for a few days at clearing, spend a few days doing some other job, and then return to

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

clearing. After planting there is also considerable leeway before the first and only weeding. This is not the case in plow culture. Although there is considerable leeway in the time of planting, once planting has been done, the cultivations must follow soon after at regular intervals or the yields will be cut appreciably. Furthermore, there is need to take advantage of dry days when the oxen can get into the field.

The differences between the work cycles of the two systems are shown in Chart 2.

CHART 2. Comparison of Work Cycles in Plow and Hoe Culture, 1944.



It will be seen that the agricultural year begins at different times in each case. The *tlacololeros* begin work very soon after the harvest and work through the larger part of the dry season, while the farmers of plow culture let their land rest, except for a relatively few farmers who plow new land in January or March. The fact that different farm families in the same village are engaged in different activities during the same season of the year adds to the complexity of village life. Here again, the picture of homogeneity in activities which is so often associated with so-called folk cultures has to be modified. Most *tlacololeros* are through planting before planting begins in plow culture, and many accept work as peons in plow culture. However, during late July and early August the peak labor season for plow culture finds *tlacololeros* busy in their own fields. Similarly, harvest comes at the same time in both systems and it is at this time that there is a labor shortage in the village. Many Tepoztecans have described this overlapping of work cycles as a conflict of interests between *tlacololeros* and milpa owners, for the latter are unable to get sufficient hired help.

A comparison of the yields of the two types of agriculture reveals that hoe culture yields are equal to the best yields in plow culture and are generally about twice as high as the average yields of plow culture. These larger yields make hoe

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

culture quite attractive. One might ask therefore why more people do not work *tlacolol*. There are a number of reasons. First, the difficulty of the work discourages many, and the fact that *tlacolol* has traditionally been viewed as work for the poor is also undoubtedly a factor. Second, many families who have worked as peons have no corn at the harvest and have to seek some cash income regularly to support their families. In other words, even in the case of *tlacolol* which takes so little capital a man must have corn to support his family if he is to spend the long periods of time necessary for clearing the scrub forest. Third, and by far the most important consideration, is the limited amount of *tlacolol* land; a shortage which is being felt more and more as the number of *tlacololeros* has increased. The *tlacolol* system of cutting and burning, by its very nature, demands large reserve areas; it takes about ten years for cleared land to grow back into scrub forest and be worth clearing again. If all the villagers were to open *tlacolol* clearings in a single year, there would be no possibility of planting in new clearings again for at least ten years.

The costs of hoe culture in terms of the value of man-days are much higher than in plow culture, but by the same token little hired labor is used. *Tlacolol* is practical only for people with a lot of time and little capital. It is much too inefficient a system for production for the market on a large scale. As we have seen in Table 37, there is considerable range in costs even in hoe culture. Most of this range in the cases cited is due to the difference between the two types of terrain used in hoe culture, that is, *cerro tlacolol* and *texcal tlacolol*. In the *cerro*, fencing is a much more time-consuming operation because there is more danger of cattle getting into the fields, but cattle rarely get into the *texcal*.

This brings us to one of the crucial problems in Tepoztlán, namely, the rapid increase of population with no accompanying increase in resources or improvement in production techniques. On the contrary, the increase in the number of *tlacololeros* represents a return to a more primitive type of production in an effort to escape the devastating effects of a money economy during a period of inflation. We have already noted the sharp rise in the cost of renting or buying a team of oxen as well as other tools of plow culture, and we have also noted that only about one-third of all landowners have their own oxen teams. Labor costs have also gone up, and indeed the wages paid to day laborers in Tepoztlán are considerably higher than in other parts of Mexico, perhaps because of the proximity of Tepoztlán to large urban centers. In any case these costs are beyond the capacity of many Tepoztecans, and they turn to *tlacolol*. *Tlacolol* has eased for many the shock of the rapid rise in prices. Although it is helping to resolve the immediate problem, it by no means offers a satisfactory solution. In fact, it increases the problems to be faced.

Were Tepoztlán a primitive culture with the usual high birth rate and high death rate, and stable and small population, the technique of *tlacolol*, though wasteful and inefficient, might be workable. But in the face of an ever-increasing population and higher standards of living, the primitive techniques of *tlacolol* no longer seem to be feasible. The necessity of clearing new plots of land every third year, the rapid depletion of the land and its forest resources, and the consequent danger of erosion are problems which will soon have to be reckoned with.

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

that cattle stealing increases markedly before important fiestas, particularly before the Carnaval in February, the fiesta of Ixcatepec in April, the celebration of the national holidays in August, and All Saints' Day on November first. Cattle thieves are shot on sight, and each year a few are killed.

It is estimated that the families who own considerable cattle spend approximately 140 days during the year in caring for them. A rough estimate of the distribution of the time, based on interviews with a few cattle owners, follows:

Month	*Days Spent Guarding Cattle*
January	8
February	8
March	8
April	12
May	12
June	4
July	4
August	15
September	30
October	31
November	4
December	4
Total	140

Although cattle and other livestock are an important supplementary source of income, animal ownership is on a small scale and is limited to a relatively small proportion of families. Table 39 presents the distribution of cattle, oxen, horses, mules, donkeys, and hogs among families in each of the barrios.

It can be seen that only 179, or 21 per cent, of the families own cattle. Well over 50 per cent of these families own between one and three cows; about 40 per cent own four to ten cows. The largest herd in 1943 was a little over seventy head, although estimates obtained in 1947 showed much larger herds, with the two wealthiest cattlemen having about 150 head each. There are only about a dozen men in the village who might be said to raise cattle on a large scale, and only six of these have herds of over fifty.

The ownership of oxen is limited to 177, or 20 per cent of the families. Of these, only two families own more than one team of oxen. The low percentage of families owning a team of oxen indicates the limited extent to which Tepoztecan farmers own one of the basic means of production.

The distribution of horses, donkeys, and mules owned by families in the proportions of 28 per cent, 11 per cent, and 14 per cent, respectively, reflects the local evaluation of work animals. Mules are more popular than donkeys, and horses are valued more highly than either. Riding horses as against work horses are considered

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

314 kiln. (See Fig. 31.) The kiln is then covered with earth on all sides, except for a small opening which is left for a draft of air to enter, so that the fire can be kept

Fig. 31. A charcoal kiln.

smouldering. The kiln is then lighted and allowed to smoulder for anywhere from 24 to 48 hours, depending upon the size of the wood pile. The worker must continuously be on the watch to prevent too much air from fanning the fire, and thus burning the wood rather than producing charcoal. So it is necessary for the charcoal burner to sleep out in the forest for one, two, or three nights.

314 433 [461] The following estimate of the production time, cost, and yield was obtained from a charcoal burner, and gives us some insight into the economics of this

TABLE 41. Charcoal Production, 1934–1942.*

Years	Vegetable Carbon (in Kilos)
1934	1,209,430
1935	137,400
1936	264,500
1937	955,060
1938	475,400
1939	426,570
1940	—
1941	221,119
1942	232,039
Total	3,921,518

[474] [578]

* The sharp decline after 1934 reflects the falling off in production following the killing of the forestry cooperative leader, Juan Hidalgo. Slowly production increased until 1937, when the cooperative was disbanded. Since that time there has been a marked diminution in production.

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

occupation. The informant worked for ten days: three days in felling trees and cutting up the wood, one day in collecting the wood at one spot, one day in making the kiln, four days and nights in watching the kiln, and one day in taking off the dirt and putting the charcoal into sacks. The yield was 18 sacks or 9 *cargas* of charcoal. Each *carga* sold at 13 pesos, yielding 117 pesos. From this sum the informant had to pay 2 pesos a *carga* for transportation to Cuernavaca and 1½ pesos a *carga* for tax, totaling 31½ pesos, leaving him 85½ pesos for ten days' work. Since daily wages in agriculture at the time were about 4½ pesos, the income from charcoal is considered good in Tepoztlán. But charcoal burning is thought of as dirty work, and it ranks very low in prestige, being identified as a last occupational resort of the poor. Nevertheless, some well-to-do families in the outlying barrios spend part of their time in burning charcoal.

Until 1947, most of the charcoal in Tepoztlán was transported by burro to Yautepec. Since that time the bus line has agreed to transport charcoal, so that much of it now goes to Cuernavaca. The price of transport in 1948 was 2 pesos a *carga*. Occasionally a truck from Mexico City or Cuernavaca comes into Tepoztlán to transport charcoal.

CIRUELAS—HOG PLUMS

The *ciruela* is now an important cash crop in Tepoztlán, and according to informants it was introduced into Tepoztlán in 1865. There was little interest until it was discovered that the *ciruela* was pleasant to eat, and more trees were planted.

The *ciruela* can be easily propagated by cuttings. All that is necessary is to prepare a hole some 30 x 30 cms. wide and about 70 cms. deep and to place in it a branch from the mother tree—a branch 2 to 3 meters long and 5 to 10 cms. in diameter. The hole is then filled with soil and tightly packed. Cuttings may be made at any time of the year with good results. The only precaution necessary is to see that the cuttings are not disturbed while they are rooting, lest the young roots be broken. The trees begin producing in from 3 to 4 years, and production increases as the trees grow. Trees grow to a huge size. (See Fig. 32.)

Ciruelas first became a cash crop in Tepoztlán about 1901, or shortly after the railroad was built through the municipio. But transporting the *ciruelas*, by mule to the railroad and then by rail to Mexico City, incurred great expense and delay. Irregular train schedules often caused the fruit to spoil. After the highway was built, merchants from Mexico City and Cuernavaca sent their trucks to Tepoztlán during harvest, and the cash crop value of the *ciruelas*, transported in this way, increased. They are packed in wooden boxes known as *guacales*. Each *guacal* contains about nine gross of *ciruelas*. The price of a *guacal* in October, 1943, was six pesos. It is estimated that Tepoztlán exports about 7,000 *guacales* a year, a total crop value of about 42,000 pesos.

Prices are fixed by merchants from Cuernavaca and Mexico City. The merchants get together and decide among themselves what they will pay per gross for the fruit. Mexico City is the principal market.

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

In anger Tepoztecans frequently throw stones at an offending person or animal. If a man is not pleased with his food he may throw it to the ground. Some women throw household objects in a fit of temper. Small children express rage in temper tantrums; and fighting among children, particularly boys, sometimes occurs in the absence of adults. Assault and murder also occur from time to time.

Fighting or attack is rarely the result of a direct challenge but may occur if two enemies meet when drunk or when one is ambushed by another. There is no tradition of giving warning or a "sporting chance"; rather, the victim is generally taken unaware, preferably under cover of darkness. A man may be beaten, shot, or fiercely slashed with a machete. Often the aggressor hits and runs without pausing to ascertain the condition of the victim. Several men, principally *políticos*, bear scars from such attacks. Men in positions of wealth, power, or authority habitually carry a gun for protection and prefer not to venture out at night. The authorities generally are unable to apprehend the culprit, who flees the village for a time.

Viewed historically, revolutions, civil wars, and political upheavals have offered a major outlet for direct aggression. It must be noted, however, that militarism and the glorification of the soldier are not Tepoztecan ideals. The history of the Revolution of 1910-20 in Tepoztlán reveals much bickering and feuds and a great deal of killing for reasons of envy and the seeking of power. Tepoztecan generals and other leaders were killed by jealous rivals within their own ranks as much as in battle.

How do Tepoztecans seek security in this environment? Security is sought first and foremost through the economic independence of the biological family. Work, industry, and thrift, for the purpose of accumulating property in land and animals, are the highest, most enduring values in Tepoztlán. To be able to provide the family with food, clothing, and shelter is the only real assurance against want or interference. To many, hard work becomes an end in itself. So long as a man devotes his time and powers to work, he feels secure and blameless; he judges his worth by the amount of his labors, rather than by what he produces. Thus, Tepoztecans frequently say that all is well even though they eat only *tortilla con sal*.

The absolute emphasis upon the need to work and the brutalizing, isolating nature of the farmer's work have far-reaching effects on his personality and his relations with others. One of these effects is to make him an individualist with faith in his own power alone and with reluctance to seek or give economic aid, to borrow or lend, or to cooperate with others in public and private enterprises.

On the other hand, economic independence and individualism do not preclude certain loyalties, identifications, and reciprocities with others, but rather make these imperative for survival. Loyalty and cooperation within the biological family is a necessary adjunct to individual independence. Without a family to back him up, the individual stands unprotected and isolated, a prey to every form of aggression, exploitation, and humiliation known in Tepoztlán. The fate of lone widows and of orphaned or fatherless children is generally a sad one, even when the extended family offers help. Although the role of the extended family is protect-

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

the mother may eat a greater variety of food. Most women continue to avoid black coffee and chile for one month because they "irritate."

When the mother has taken her last *temascal* and gets out of bed, she is usually given a boiled mixture of many herbs (*paclaposon*),[14] which she drinks before meals twice a day until two quarts are consumed. Some also take this before entering the first *temascal* and for one day thereafter. If the woman does not feel well before entering the second *temascal*, she may be given the same mixture of herbs *potlatsetli*, which are now toasted and ground rather than boiled. If bleeding has not stopped after two months, the woman is again given *paclaposon*. Strained honey is also used because it provokes more bleeding which, it is thought, brings the end of bleeding closer. A mixture of herbs similar to a mustard plaster (*vilma*) may also be placed on the back. Excessive bleeding is attributed to a weakening of the back.

After leaving her bed, the mother is supposed to sit quietly with knees doubled under and to avoid walking or moving about for as long as she can. If she must walk, she goes very slowly with her thighs close together. If this is the first child, the mother may keep this up for three months; others return to normal moving about, in from one to two months. Only the most unfortunate women, however, do heavy work, such as washing and ironing before three months. In the past, women frequently did not work for as long as six months and were considered too weak to carry the baby. The new mother is not supposed to leave the house before the *sacamisa* attended by the new mother and child, which generally takes place in forty days or after the fourth *temascal*. If the mother leaves the house before this time, the baby's godmother may refuse to attend the *sacamisa*, on the grounds that the mother is not taking proper care of herself.

COMPARISON WITH OTHER MEXICAN COMMUNITIES

Many of the practices and beliefs concerning pregnancy and birth found in Tepoztlán are widespread in rural Mexico and have been reported for at least Tarascan (Tzintzuntzan and Cherán), Mayan (Chan Kom), and Zapotecan (Mitla and the Isthmus of Tehuantepec) groups. The similarity, even in small details, is sometimes quite striking. For example, we find that in Tzintzuntzan and Mitla the satisfaction of food whims during pregnancy is important. In Tzintzuntzan and Cherán, pregnant women should not urinate where an animal has urinated, and in both these communities, as well as in Mitla and in Tehuantepec,[15] there is fear that an eclipse may deform the unborn child. In Tzintzuntzan and Tehuante-

[14] The following herbs are placed in several gallons of water and boiled for twenty-four hours, or until one quart of the liquid remains: *cacamotil, cuchkot-kot, pulmonaria, hrotonia* or *ojolote, sangrinaria, cubrigüela* or *cola de ilamatle, lengua de zopilote, xeshtichiuil, tochukan, xuallik, tripa de judas* or *tuscili, ilacmoxtil, mamachi, ipuch katsil* or *oguduxuillo, cascara de cacino, flor de padre* or *doradillo* or *siempre viva, [illegible]komotl, kuaxkomate*, and *tlelimatsinsin* or *barbello*.

[15] Miguel Covarrubias, *Mexico South, the Isthmus of Tehuantepec* (New York: A. Knopf, 1946), p. 342.

2:Lewis E-5 (1943-1948)1951 NU37 Tepoztlan NU37

796 *Fiesta of Sixth Friday of Lent or Viernes de Dolores*, celebrated in the parish church: Fasting is required. This is the beginning of Holy Week.

785 *Fiesta of Sábado de Dolores*, celebrated in the parish church: This is celebrated with holy offices and a Vía Crucis procession.

778 *Fiesta of Palm Sunday*, celebrated in the parish church: This is a very important holi-
821 day. Tepoztecans take palm leaves to be blessed by the priest. It is believed that blessed
755 palm protects against lightning. Ashes of blessed palm placed upon the head are thought to cure bad headaches. Blessed palm is also placed at the door of the house to prevent fires and being struck by lightning.

Fiesta of Holy Monday and Holy Tuesday, celebrated in the parish church: These are
783 days of great devotion. The religious associations are very active, visiting the church and barrio chapels. Many Tepoztecans choose these days for their annual confession.

785 *Fiesta of Holy Wednesday:* Rigorous fasting begins. Meat is not eaten until the Saturday
262 of Glory. Substitute foods are beans, *huauzontle*, *tortas*, stuffed peppers, fish, *revoltijo*,
461 and lentils. All work must stop through the Sunday of Resurrection. Women prepare tortillas for the rest of the week. In the evening is the vigil of the Lord, the men taking turns all through the night. Women customarily go to church in the late afternoon to
777 pray the thirty-three Credos, one for each year of Jesus' life. It is believed that those who do this will triple their earnings during the year.

Holy Thursday: The church is full on this day. The priest dramatically describes the
788 passion of Christ, and crying on the part of women is common. Not to do so is "to have a cold heart." In the afternoon is the ceremonial foot-washing of the apostles.

Holy Friday: This is the culminating day of Holy Week. Throughout the village there is profound quietude. No one must run or shout or use bad words, so as not to offend the Lord. The men silently drink their *ponche* together while the women, dressed in black,
861 go to church. On this day, children are not to be struck, for "it would be striking the Lord."

Holy Saturday: At 7:00 A.M. the faithful of the village and the municipio go to the
788 church where the priest pronounces the "Gloria in Excelsis Deo." With this all the bells,
824 which have been silent since Wednesday, are rung, and joy spreads through the village. While the bells ring, old men trim their plants so that they will produce more, mothers
826 snip the ends of their daughter's hair to make it grow longer, and children are struck on the legs to make them grow taller. Two or three *comparsas* are organized to dance on this
856 day.

535 *Easter Sunday:* Everyone dresses well and goes to Mass. Sometimes the *chinelos* leap
273 in the afternoon. People stand in little groups in the plaza, and men drink a great deal.

April 29. *Fiesta of San Pedro*, celebrated in San Pedro: The only unusual feature of this fiesta is the group of children who dance for San Pedro.

May 1-31. All this month is dedicated to the Virgin Mary, and *rosarios* are held every afternoon. Girls from seven to fifteen years of age dress in white and bring flowers to the Virgin.

May 3. *Fiesta of Santa Cruz*, celebrated in Santa Cruz: This fiesta is celebrated not only
782 in this barrio but in all homes and places having crosses. All crosses are adorned with flowers, especially Bougainvillaea. Incense is burned, and fireworks are set off. This fiesta is also celebrated in Ixcatepec, but is postponed until the following Sunday in deference
541 to the barrio of Santa Cruz. It is one of the best attended fiestas. There are cockfights and
648 visiting dancers from Yautepec and Milpa Alta.

2:Lewis E-5 (1943-1948) 1951 NU37 Tepoztlan NU37

May 8. *Fiesta of San Miguel*, celebrated in San Miguel: This is one of the two annual fiestas of this barrio. As one of the larger barrios, it spends huge sums to have an impressive fiesta. [796]

The following Thursday. *Fiesta of Thursday of the Ascensión*, celebrated in the parish church: This is a movable fiesta, which comes seven weeks after Holy Thursday. Mass is said in the large church, and fireworks are set off. The peasants must rest this day. [461] [439]

Ten days later. *Fiesta of Tlanepantla*, celebrated in Tlanepantla: A favorite fiesta of Tepoztecans, who carry *aguacate*, *cuajilote*, and *zapote blanco* for sale.

All of June is dedicated to the Sacred Heart of Jesus.

About June 12. *Fiesta of La Santísima*, celebrated in La Santísima: La Santísima, traditional rival of Santo Domingo, organizes an impressive fiesta, with the usual playing of the *chirimía*, and the eating of *mole* and tamales.

June 24. *Fiesta of Day of San Juan*, celebrated in San Juan: Boys and girls sing *mañanitas* to the image of San Juan at dawn. Then they visit houses where persons named Juan or Juanita live, and they sing *mañanitas*. In the afternoon, the young people go out to the fields to seek four-leaf clovers for luck. [533] [777]

June 29. *Fiesta of San Pedro*, celebrated in San Pedro: Similar to other fiestas.

July 16. *Fiesta of Day of Virgin of Carmen*, celebrated in the parish church: All who wear the scapulary of this virgin must attend Mass.

July 22. *Fiesta of Amatlán*, celebrated in Amatlán: Generally only about fifty Tepoztecans attend. [484]

July 25. *Fiesta of Santiago*, celebrated in Santiago: During our visit about 150 persons from Tepoztlán attended.

Aug. 4. *Fiesta of Santo Domingo*, celebrated in Santo Domingo: An important fiesta which lasts three days. A band is hired in Mexico City for greater prestige. There are *toros*, cockfights, dancers, and fireworks. [533] [541]

Aug. 6. *Fiesta of San Salvador*, celebrated in Santa Cruz and Ixcatepec: Follows the usual patterns of barrio fiestas.

Aug. 15. *Fiesta of the Assumption of the Virgin Mary*, celebrated in Tejalpa.

Sept. 8. *Fiesta of the Virgin of the Natividad*, patron of Tepoztlán: This is one of the most important village-wide fiestas, combining pre-Hispanic and Catholic elements. The Catholic ceremony in honor of the Virgin takes place in the church; the honor to El Tepozteco takes place out of doors. A dance to El Tepozteco is held to the accompaniment of the ancient *teponaztle* and a traditional discourse of El Tepozteco in Náhuatl is spoken. [776] [527]

Sept. 28. *Day of the Blessing of the Pericón*, celebrated in the parish church and cornfields: This is an outing day for Tepoztecans who go out into the cornfields to roast fresh corn and place crosses of blessed *pericón* at the four corners of the milpas. Similar crosses are also placed in the homes, for it is believed that on this night the demons are loose and the evil winds blow hard. [527] [778] [776]

Sept. 29. *Fiesta of Barrio of San Miguel*, celebrated in San Miguel: Follows the tradition of other barrio fiestas.

Oct. 31. *All Saints' Day (Children)*, celebrated in the parish church, in the homes, and at the cemetery: Day in commemoration of dead children. A candle is lighted for the dead child, and incense is burned.[a] [769] [782]

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[a] See Redfield, *Tepoztlán*, for more detailed description.